

Two-day treatment of trichomoniasis in the female

Comparison of metronidazole and nimorazole

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Summary

A comparison has been made of the efficiency of a 2-day course of metronidazole (Flagyl) with that of a similar course of nimorazole (Naxogin) in the treatment of trichomoniasis.

Of the 105 consecutive patients treated, 72 were finally included in the study (38 on metronidazole and 34 on nimorazole). Follow-up tests indicated an overall cure rate of 84.3 per cent. in those given Flagyl and 85.3 per cent. in those given Naxogin. Consorts were treated in just over 55 per cent. of cases in both groups. An attempt has been made to classify the recurrences as either 'primary' treatment failures or re-infections. Although both drugs were effective in the majority of cases, 'primary' treatment failure appeared to be commoner in the group receiving metronidazole. It is emphasized that the total dose of metronidazole was substantially lower than that recommended by the manufacturers.

Introduction

Since the introduction of metronidazole (Flagyl) (Durel, Roiron, Siboulet, and Borel, 1960) for the treatment of *Trichomonas vaginalis* infestation the standard dosage has been 200 mg. three times a day for 7 days, consorts being treated simultaneously. Nimorazole (Naxogin) was introduced in 1969, the recommended dosage being 250 mg. 12-hrly for 6 days. The cure rates for metronidazole and nimorazole in the recommended dosage are of the order of 95 and 82 per cent respectively (Roy, Laird, and

Heasman, 1974). More recently attempts have been made to simplify treatment by the use of short-term, high-dose schedules (Woodcock, 1972; Campbell, 1972; Davidson, 1973).

The present study of a group of women attending the Special Clinic, Royal Victoria Hospital, Bournemouth, compares the effect of a 'two-day' treatment with metronidazole with that of a similar treatment with nimorazole.

Material and methods

The study was carried out on 105 consecutive female patients with *T. vaginalis* infestation attending between November, 1973, and September, 1974. Diagnosis was made by finding the parasite in 'wet' smears and confirmed by culture in Oxoid R27 trichomonas medium for 48 hrs at 35°C. All female patients had a routine examination which included smears and culture for *Neisseria gonorrhoeae* (from urethra and cervix) and wet drop and culture for *Candida albicans*. Blood for routine serum testing for syphilis (Venereal Disease Reference Laboratory and Reiter protein complement-fixation tests) was taken at the initial visit and at the end of the period of follow-up or after 3 months.

Alternate patients were given either:

- (1) Metronidazole 400 mg. stat then 400 mg. 12-hrly for four doses to a total of 2 g.
- (2) Nimorazole 750 mg. stat then 750 mg. 12-hrly for three doses to a total of 3 g.

Patients were asked to refrain from further sexual intercourse during the period of surveillance and to attend at 7, 14, and 28 days for follow-up visits and monthly thereafter if possible. Only patients who attended for a minimum of 28 days and/or three follow-up visits were included in the trial. All available contacts were treated with the same drug and dosage as their female partners, whether or not they showed evidence of urethritis.

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TABLE Results in 105 cases of trichomoniasis

Drug	No. treated	No. followed-up	Results			
			Cured	Recurrence	Re-infection	Primary failure
Metronidazole	53	38	32	6	2	4
Nimorazole	52	34	29	5	4	1

Results

In the present study, 72 out of the 105 consecutive females attended for the minimum follow-up and/or three post-treatment visits (Table). The remaining 33 were excluded because of failure to attend for follow-up visits; two of these (one on each drug) were excluded because they failed to take the tablets as instructed.

One patient on metronidazole complained of indigestion after the tablet, otherwise no side-effects were noted.

The overall default rate was thus 31 per cent. of the original total treated (28 per cent. of those on metronidazole and 34.6 per cent. of those on nimorazole).

In the 38 patients on metronidazole there were six recurrences during the period of follow-up; four of these were thought to be due to treatment failure and two to re-infection. In the 34 patients on nimorazole, five recurrences were observed; one was a probable treatment failure and four were thought to be due to re-infection. This indicates an overall recurrence rate of 15.7 per cent. in patients on metronidazole, and 14.7 per cent. in those on nimorazole. If, however, the cases thought to be due to re-infection are excluded, the 'primary' failure rate for metronidazole is approximately 10.5 per cent. and for nimorazole 3 per cent.

Of the patients on metronidazole 90 per cent. and of those on nimorazole 94 per cent. were born in the United Kingdom. Their ages ranged from 13 to 49 yrs, the average for both groups being 22.6 yrs. Of the metronidazole and nimorazole groups 87.2 and 86.9 per cent. respectively, were either single, divorced, or separated. Among the original 53 patients in the former group there were 61 pregnancies compared to 43 pregnancies in the 52 patients in the latter. Evidence of previous trichomonal infestation was present in four patients in the nimorazole group and in eight of the metronidazole group.

Of the original 105 patients treated—59 (56 per cent.) had one or more consorts treated simultaneously (two further male consorts although untreated were detained in prison during the study);

the contacts were equally divided between the two groups.

Gonorrhoea was found at the initial visit in twenty (19.4 per cent.) of all those treated.

Discussion

The classification of recurrences as 'primary' or 'secondary' failures (Campbell, 1972) based on the number of days after treatment when recurrence is diagnosed is somewhat arbitrary, although it is reasonable to suppose that recurrence later than 14 days is indicative of re-infection. In this study an attempt has been made to divide the recurrences into treatment failures and re-infections, taking into consideration (a) a history of resumption of intercourse or its denial, (b) date of recurrence, and (c) consort attendance for treatment. Cases thought to be due to re-infection have usually had at least one 'clear' follow-up visit before the recurrence; with 'primary' treatment failure this is not found to be the case. An overall cure rate of around 85 per cent. for both drugs is comparable with that reported in other series (Woodcock, 1972; McCann, Mahony, and Harris, 1974) and also in series with single-dose treatment (Csonka, 1971; Morton, 1972). The absence of gastrointestinal side-effects (Davidson, 1973) noted in this study may well be attributable to the relatively low dosage used, especially in the case of metronidazole.

There was no evidence from this study that the recurrence rate amongst the twenty patients with concurrent gonorrhoea was greater than that in the series as a whole.

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